one hand, and the distribution of land and water on the other. An increase or diminution to a considerable extent of the bulk of the waters of the ocean, and consequently of their equalizing influence, would so affect the temperature as to render it doubtful if any of the existing species of plants and animals could survive.

The mass of our planet, with its power of gravity, is in admirable adaptation to the plants which grow upon its surface, and the living beings that people it. Were our earth much larger or much less than it i*, the force with which it attracted bodies at its surface would be so (litrerent, that the greater number of the plants would die, and the animals which did not become extinct would lead a burdensome existence. It seems that plants pump up, by means of some internal force, the sap which is needful for their sustenance. It requires no little force thus to raise the sap till it reaches every branch and leaf of the living tree. An experiment lias been tried with a vine at the bleeding season. A 1)ranch of a growing plant was amputated, and a glass tube was placed upon the stump, and the sap was pushed to no less a height than twenty-one feet in the tube. Now, were the earth heavier than it is, and consequently the power of gravity increased, the plant could not with its present organization draw up the necessary moisture; and on the oilier hand, were the force of gravity lessened, the sap would rise so rapidly as to derange all the functions of the plant. The author from whom we have taken this illustration also supplies us with another in the flowers that hang their heads, in the structure of which it in arranged that the pistils are longer than the stamens; and thus the dust needful for the fertility of the ildwer is enabled to fall from the extremity of the sfameiiH upon the extremity of the pistil. "An earth greater or smaller, denser or rarer, than the one on which we live, would require a change in the structure and strength of

the footstalks of all the little flowers that hang their heads under our hedges. There in something curious in thus considering the whole mass from pole to pole, and from circumference to centre, as employed in keeping a snow-drop in tlicposil ion most suited to the promotion of its vegetable health."*

We (hid, too, that the wxe of tlio earth boars an admirable relation to the muscular strength of man and animate. Were the earth increased or lessened *In* its mass, the greatest inconvenience

* Wlnwlfh Astronomy ami Phynics, p. 48